**WHAT IS CLAIMED IS:**

1. A tire carrier assembly for storing a spare tire on a vehicle, said tire carrier assembly comprising, in combination:

a carrier adapted for supporting the spare tire;

a winch operatively connected to the carrier to raise and lower the carrier between a stowed position wherein the carrier is inaccessible and a deployed position wherein the carrier is accessible;

wherein the winch has a flexible member secured to the carrier and one of an electric motor and a manual device which selectively raises and lowers the carrier between the stowed and deployed positions;

a monitoring device adjacent the winch; and

a control module operably connected to the monitoring device to monitor movement of the carrier from the deployed position toward the stowed position.

2. The tire carrier assembly according to claim 1, wherein the monitoring device includes a switch portion and a biased probe.

3. The tire carrier assembly according to claim 1, wherein the monitoring device deflects the flexible member to determine a tension force level in the flexible member.

4. The tire carrier assembly according to claim 1, wherein the monitoring device is one of a contact switch and an analog sensor.

5. The tire carrier assembly according to claim 1, wherein the control module is programmed to monitor a tension force level in the flexible member and to send a signal to the winch to stop further movement of the carrier toward the stowed position when the tension force level exceeds a predetermined level.

6. The tire carrier assembly according to claim 1, wherein the winch has a reel upon which the flexible member is wound and unwound to raise and lower the carrier and the control module is programmed to activate the motor to rotate the reel to increase a tension force level in the flexible member in response to a signal received from the monitoring device.

7. The tire carrier assembly according to claim 1, wherein the control module is operatively connected to a condition monitoring device and the control module is programmed to prevent the winch from deploying the carrier in response to receiving one signal from the condition monitoring device and is programmed to permit the winch to deploy the carrier in response to receiving another signal from the condition monitoring device.

8. The tire carrier assembly according to claim 1, further comprising a motion monitoring device to sense movement of the flexible member.

9. A tire carrier assembly for storing a spare tire on a vehicle, said tire carrier assembly comprising, in combination:

a carrier adapted for supporting the spare tire;

a winch having a flexible member operatively connected to the carrier and having an actuation member connected to the flexible member to raise and lower the carrier between a first position and a second position relative to the vehicle;

a monitoring device adjacent the flexible member to measure tension in the flexible member when the tire carrier is raised from the first position to the second position;

a control module operably connected to the monitoring device to monitor a tension force level in the flexible member as the tire carrier moves from the first position toward the second position; and

wherein the control module is programmed to prevent further movement of the carrier toward the second position when the tension force level in the flexible member exceeds a predetermined tension level.

10. The tire carrier assembly according to claim 9, wherein the monitoring device includes a probe and a switch to deflect the flexible member and determine the tension force level in the flexible member.

11. The tire carrier assembly according to claim 10, wherein the monitoring device monitors the tension force level to maintain a predetermined tension force level in the flexible member when the carrier is in the first position.

12. A tire carrier assembly for storing a spare tire on a vehicle, said tire carrier assembly comprising, in combination:

a carrier adapted for supporting the spare tire;

a winch having a flexible member operatively connected to the carrier and having one of an electric motor and a manual device connected to the flexible member to raise and lower the carrier;

a monitoring device adjacent the winch to control movement of the carrier between a stowed position wherein the carrier is inaccessible and a deployed position wherein the carrier is accessible; and

wherein the monitoring device includes at least one of a tension monitoring device, a force switch, a limit switch, a hall effect sensor, a hall effect device, a stress monitoring device, a pressure sensor, a contact position sensor, and a non-contact position sensor.

13. A tire carrier assembly for storing a spare tire on a vehicle, said tire carrier assembly comprising, in combination:

a carrier adapted for supporting the spare tire;

a winch having a flexible member operatively connected to the carrier and having one an actuation member to raise and lower the carrier;

means for monitoring movement of the carrier from one position toward another position so that the spare tire is moved toward the another position and providing a signal to

prevent further movement of the carrier toward the another position when movement of the carrier produces a monitored condition having a predetermined level.

14. The tire carrier assembly according to claim 13, wherein the activation member is one of a motor and a manual device.

15. A method of storing and accessing a spare tire on a vehicle, comprising the steps of:

placing the spare tire on the tire carrier, the tire carrier including a winch assembly and a flexible member, the winch assembly being connected to one of a motor and a manual device;

raising the spare tire from a deployed position wherein the spare tire is accessible toward a stowed position wherein the spare tire is inaccessible;

monitoring a current condition including at least one of location of the tire carrier relative to the vehicle, tension level in the flexible member, and length of the flexible member;

discontinuing the raising step when the current condition corresponds to a predetermined level.

16. The method according to claim 15, further comprising the step of monitoring movement of the tire carrier with a monitoring device selected from at least one of a tension force device, a force switch, a limit switch, a hall effect switch, a hall effect sensor, a stress monitoring device, a pressure sensor, a contact position sensor, and a non-contact position sensor.

17. A method of storing an accessing a tire carrier assembly on a vehicle, comprising the steps of:

moving the tire carrier from a stowed position wherein the tire carrier is inaccessible to a deployed position wherein the tire carrier is accessible;

measuring one of position of the tire carrier relative to the vehicle, tension level in the flexible member, stress in a member supporting the tire carrier, output of a pressure sensor, and deployed length of the flexible member relative to the vehicle; and

monitoring at least a portion of the movement of the tire carrier from the deployed position toward the stowed position.

18. The method according to claim 17, further comprising the step of controlling the moving step with one of a motor and a manual device.

19. The method according to claim 17, further comprising the step of increasing tension in the flexible member when tension in the flexible member falls below a predetermined level.

20. The method according to claim 17, further comprising the step of controlling the moving step with a motor and connecting the motor to a control module which self regulates movement of the tire carrier between the deployed position and the stowed position